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<b>SUPPLEMENTAL</b> <b>INFORMATION DISCLOSURE</b> <b>STATEMENT BY APPLICANT</b> ( Not for submission under 37 CFR 1.99)	Application Number		10693532
	Filing Date		2003-10-23
	First Named Inventor	J. Rodney Walton	
	Art Unit	2419	
	Examiner Name	TSEGAYE, SABA	
	Attorney Docket Number	020573	

## U.S. PATENTS

Examiner Initial*	Cite No	Patent Number	Kind Code <sup>1</sup>	Issue Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear
	1	4750198		1988-06-07	HARPER	
	2	5404355		2009-05-07	RAITH, A.	
	3	5509003		1996-04-16	SNJIDERS et al	
	4	5982327		1999-11-09	VOOK et al	
	5	6351499		2002-02-26	PAULRAJ et al	
	6	6363267		2002-03-26	LINDSKOG et al	
	7	6697346		2004-02-24	HALTON et al.	
	8	6731668		2004-05-04	KETCHUM	

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9	6952426		2005-10-04	WU, et al.	
10	6956813		2005-10-18	FUKUDA, Kunio	
11	7006464		2006-02-28	GOPALAKRISHNAN, et al.	
12	7095709		2006-08-22	WALTON, et al	
13	7164669		2007-01-16	LI, et al.	
14	7283508		2007-10-16	CHOI, et al.	
15	7292854		2007-11-18	DAS, et al.	
16	6330462		2001-12-11	CHEN, Tao	
17	7190749		2007-03-13	LEVIN ET AL.	

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**U.S. PATENT APPLICATION PUBLICATIONS**

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1	20020154705	2002-10-24	WALTON, et al	
2	20030125040	2003-07-03	WALTON, et al	
3	20030202492	2003-10-30	AKELLA, et al.	
4	20040042556	2004-03-04	MEDVEDEV et al	
5	20040176097	2004-09-09	WILSON, et al.	
6	20050208959	2005-09-22	CHEN, et al.	
7	20060183497	2006-08-17	PARANCHYCH, et al.	
8	20020193146	2002-12-19	WALLACE ET AL.	

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**FOREIGN PATENT DOCUMENTS**

Examiner Initial*	Cite No	Foreign Document Number <sup>3</sup>	Country Code <sup>2</sup> i	Kind Code <sup>4</sup>	Publication Date	Name of Patentee or Applicant of cited Document	Pages, Columns, Lines where Relevant Passages or Relevant Figures Appear	T <sup>5</sup>
	1	0755090	EP		1997-01-22	NORTEL NETWORKS LIMITED		<input type="checkbox"/>

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2	1170879	EP		2002-01-09	MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.	<input type="checkbox"/>
3	1207635	EP		2002-05-22	LUCENT TECHNOLOGIES INC.	<input type="checkbox"/>
4	2300337	GB		1996-10-30	ERICSSON Ge MOBILE COMMUNICATIONS INC	<input type="checkbox"/>
5	2006-0095576	KR		2006-08-31	QUALCOMM INCORPORATED	<input type="checkbox"/>
6	2201034	RU		2003-03-20	TELEFONAKTIEBOLAG ET LM EHRIKSSON	<input type="checkbox"/>
7	2335852	RU		2006-01-02	KVEHLKOMM INKORPOREJTED (US)	<input type="checkbox"/>
8	01076110	WO		2001-10-11	QUALCOMM, INC.	<input type="checkbox"/>
9	02025853	WO		2002-03-28	IOSPAN WIRELESS, INC.	<input type="checkbox"/>
10	02078211	WO		2002-10-03	QUALCOMM INCORPORATED	<input type="checkbox"/>
11	03010984	WO		2003-02-06	NORTEL NETWORKS LIMITED	<input type="checkbox"/>
12	03019984	WO		2003-03-06	COMMISSARIAT A L'ENERGIE ATOMIQUE	<input type="checkbox"/>

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13	04039011	WO		2004-05-06	QUALCOMM INCORPORATED	<input type="checkbox"/>
14	95030316	WO		1995-11-09	MOTOROLA INC.	<input type="checkbox"/>

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**NON-PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc), date, pages(s), volume-issue number(s), publisher, city and/or country where published.	T5
	1	ALAMOUTI, S.M., "A Simple Transmit Diversity Technique for Wireless Communications," IEEE Journal on Select Areas in Communications, Vol.16, No.8, October 1998, pgs.1451-1458	<input type="checkbox"/>
	2	CHEN, K.C. et al., "Novel Space-Time Processing of DS/CDMA Multipath Signal," IEEE 49th, Vehicular Technology Conference, Houston, Texas, May 16-20, 1999, pgs. 1809-1813	<input type="checkbox"/>
	3	CHOI, R. et al., "MIMO Transmit Optimization for Wireless Communication Systems," Proceedings of the First IEEE International workshops on Electronic Design, pgs. 1-6, Piscataway, New Jersey, January 29-31 (2002)	<input type="checkbox"/>
	4	ETSI TS 101 761-1 v1.3.1, "Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; Data Link Control (DLC) Layer; Part 1: Basic Data Transport Functions," ETSI Standards, European Telecommunications Standards Institute BR (V131), pgs. 1-88 (2001-12)	<input type="checkbox"/>
	5	FUJII, M.: "Pseudo-Orthogonal Multibeam-Time-Transmit Diversity for OFDM-CDMA" pgs.222-226 (2002)	<input type="checkbox"/>
	6	HAUSTEIN, T. et al.: "Performance of MIMO Systems with Channel Inversion," IEEE 55th Vehicular Technology Conference, Birmingham, Alabama, May 6-9 (2002), pgs. 35-39	<input type="checkbox"/>
	7	HONG, D' K. et al.: "Robust Frequency Offset Estimation for Pilot Symbol Assisted Packet CDMA with MIMO Antenna Systems," IEEE Communications Letters, vol. 6, no. 6, pgs. 262-264 (June 2002)	<input type="checkbox"/>

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8	IEEE Std 802.11a-1999 (Supplement to IEEE Std 801.11-1999) "Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) specifications: High-Speed physical Layer in the 5GHz Band", pgs. 1-90, September 1999	<input type="checkbox"/>
9	JOHAM, M. et al.: "Symbol Rate Processing for the Downlink of DS-CDMA Systems", IEEE Journal on Selected Areas in Communications, Vol. 19, No. 1, paragraphs 1, 2; IEEE Service Center, Piscataway, US, (2001-01-01), XP011055296, ISSN: 0733-8716	<input type="checkbox"/>
10	PAUTLER, J. et al.: "On Application of Multiple-Input Multiple-Output Antennas to CDMA Cellular Systems," IEEE 54th Vehicular Technology Conference, Proceedings, Atlantic City, New Jersey, October 7-11 (2001), pgs. 1508-1512	<input type="checkbox"/>
11	TARIGHAT, A. et al.: "Performance Analysis of Different Algorithms for cdma2000 Antenna Array System and a New Multi User Beamforming (MUB) Algorithm", Wireless Communications and Networking Conference, pgs. 409-414 09-2000.	<input type="checkbox"/>
12	THOEN, S. et al.: "Improved Adaptive Downlink for OFDM/SDMA-Based Wireless Networks," IEEE VTS 53rd Vehicular Technology Conference, pgs. 707-711, Rhodes, Greece, May 6-9, (2001)	<input type="checkbox"/>
13	TUJKOVIC, D.: "High bandwidth efficiency space-time turbo coded modulation", Institute of Electrical and Electronics Engineers, ICC 2001. 2001 IEEE International Conference on Communications, Conference Record, pgs. 1104-1109, Helsinki, Finland, June 11-14 (2001)	<input type="checkbox"/>
14	VAN ZELST, A. et al.: "Space Division Multiplexing (SDM) for OFDM Systems," IEEE 51st Vehicular Technology Conference Proceedings, pgs. 1070-1074, Tokyo, Japan, May 15-18 (2000)	<input type="checkbox"/>

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**EXAMINER SIGNATURE**

Examiner Signature	/Saba Tsegaye/ (07/31/2009)	Date Considered
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